

CLAIMS

What is claimed is:

- 5 1. A gravity-sensitive latch comprising:
 - a housing;
 - a button supported for slidable movement relative to said housing;
 - a pendulum operatively connected to said button, said pendulum pivoting between a latched position and an unlatched position;
- 10 a pawl being dimensioned and configured to engage a keeper, said pawl pivoting between a latched position and an unlatched position;
 - means for securing said housing and said button;
 - means for pivotally securing said housing and said pawl; and
 - means for operatively connecting said pendulum and said pawl.
- 15 2. The gravity-sensitive latch according to claim 1, wherein said latch can be actuated when said latch is in a horizontal position, and said latch cannot be actuated when said latch is in a vertical position.
- 20 3. The gravity-sensitive latch according to claim 1, wherein said housing has a top, a bottom, a pair of sides, a front end, and a rear end.
AC
- 25 4. The gravity-sensitive latch according to claim 3, wherein said top of said housing is substantially open within a front portion of said housing, and said bottom of said housing is substantially open within a rear portion of said housing.

a pendulum pivotally secured to said pawl-retaining arm, said pendulum being dimensioned and configured to abut said handle, said pendulum pivoting between a latched position and an unlatched position; and means for pivotally securing said housing and said pawl-retaining arm.

5

24. The gravity-sensitive latch according to claim 23, wherein said latch can be actuated when said latch is in a horizontal position, and said latch cannot be actuated when said latch is in a vertical position.

10

3 25. The gravity-sensitive latch according to claim 23, wherein said housing is dimensioned and configured to receive a keeper.

15

26. The gravity-sensitive latch according to claim 23, wherein:
said housing includes a front end, a central portion defining a channel dimensioned and configured to receive said pawl and a keeper, and a rear portion dimensioned and configured to receive a pin, said channel dimensioned and configured to pivotally secure said pawl within said housing; and
said handle includes a vertical portion, a horizontal portion, and a rear end dimensioned and configured to engage with said front end of said housing.

20

5 27. The gravity-sensitive latch according to claim 26, wherein said handle includes a rearward-projecting structure for abutting said pendulum and said handle is biased towards its latched position by biasing means wherein the engagement portion of said rear end of said handle that engages with said front end of said housing is positioned below said rearward-projecting flange and said biasing means.

28. The gravity-sensitive latch according to claim 23, wherein said handle includes a rearward-projecting structure for abutting said pendulum.

29. The gravity-sensitive latch according to claim 23, wherein said handle includes a stop to prevent travel beyond a predetermined range of motion.

30. The gravity-sensitive latch according to claim 23, wherein said handle is biased towards its latched position.

31. The gravity-sensitive latch according to claim 23, wherein said pawl-retaining arm is biased towards its latched position.

32. The gravity-sensitive latch according to claim 23, wherein said pawl-retaining arm is pivotally secured to said housing at its end adjacent to said pawl.

33. The gravity-sensitive latch according to claim 23, wherein said pendulum has a connection corner, a weighted corner, and an abutment corner dimensioned and configured to abut said handle.

34. The gravity-sensitive latch according to claim 23, wherein said weighted corner extends upward.

35. The gravity-sensitive latch according to claim 33, wherein said weighted corner has greater mass than the remainder of said pendulum.

36. The gravity-sensitive latch according to claim 23, wherein said pawl-retaining arm includes a first end having at least one flange defining at least one aperture and a second end dimensioned and configured to engage said pawl, said pendulum has at least one peg protruding from said pendulum, said at least one aperture of said first end is dimensioned and configured to receive said peg of said pendulum.

37. The gravity-sensitive latch according to claim 23, wherein said pawl includes an upper forward arm and a lower forward arm extending toward said handle, a channel between said forward arms, and a third arm extending rearward, said third arm is dimensioned and configured to engage said pawl-retaining arm, said forward arms are dimensioned and configured to secure a keeper, said pawl pivots between said latched position wherein said forward arms are substantially horizontal, and said unlatched position wherein said forward arms point downward.

38. The gravity-sensitive latch according to claim 23, wherein said pawl is biased towards its unlatched position.

39. The gravity-sensitive latch according to claim 23, wherein said means for pivotally securing said housing and said pawl-retaining arm is a pin.

40. The gravity-sensitive latch according to claim 23, further comprising a keeper adapted for engaging with said pawl.

41. A gravity-sensitive latch comprising:
a housing;
a button supported for slidable movement relative to said housing, said button secured to said housing;
- 5 a pendulum operatively connected to said button, said pendulum pivoting between a latched position and an unlatched position;
- a pawl pivotally secured to said pendulum, said pawl being dimensioned and configured to engage a keeper, said pawl pivoting between a latched position and an unlatched position; and
- 10 means for pivotally securing said housing and said pawl.
- 19 18
42. The gravity-sensitive latch according to claim 41, wherein said latch can be actuated when said latch is in a horizontal position, and said latch cannot be actuated when said latch is in a vertical position.
- 15 18
43. The gravity-sensitive latch according to claim 41, wherein said housing includes a front end dimensioned and configured for securing to said button, and a rear portion dimensioned and configured for securing to said pawl.
- 20 18
44. The gravity-sensitive latch according to claim 41, wherein said button includes a structure for abutting said pendulum.
- 27 18
45. The gravity-sensitive latch according to claim 41, wherein said button includes a stop to prevent travel beyond a predetermined range of motion.

23. The gravity-sensitive latch according to claim 41, wherein said button is biased away from said housing towards its forward position.
24. The gravity-sensitive latch according to claim 41, wherein button is dimensioned and configured to receive a lock.
25. The gravity-sensitive latch according to claim 41, wherein said pendulum has a connection corner, a weighted corner, and an abutment corner dimensioned and configured to abut said button.
26. The gravity-sensitive latch according to claim 48, wherein said weighted corner extends upward.
27. The gravity-sensitive latch according to claim 48, wherein said weighted corner has greater mass than the remainder of said pendulum.
28. The gravity-sensitive latch according to claim 41, wherein said pawl includes an upper end dimensioned and configured for pivotally securing with said pendulum, a lower end dimensioned and configured to engage a keeper, and a central section dimensioned and configured for pivotally securing with said housing.
29. The gravity-sensitive latch according to claim 51, wherein said pawl pivots between said latched position wherein said lower end is rearward, and said unlatched position wherein said lower end is forward.

18 18

30 53. The gravity-sensitive latch according to claim 41, wherein said pawl is biased towards its latched position.

54. The gravity-sensitive latch according to claim 41, wherein said means for pivotally securing said housing and said pawl is a rod.

31 55. The gravity-sensitive latch according to claim 41, further comprising a keeper.

10 56. The gravity-sensitive latch according to claim 55, wherein said keeper is a plate having an opening dimensioned and configured to engage with said pawl.

32 31 57. The gravity-sensitive latch according to claim 41, further comprising a lock for preventing actuation of said latch regardless of its orientation.

15

